Review of ACV-03-20-OM-069, "Developing a demographic projection model to support conservation decision making for an endangered snake with limited monitoring data," by Anna M. Tucker, Conor P. McGowan, Eneilis Mulero, Nicole F. Angeli, amd Jan P. Zegarra.

General Comments:

This generally well-written manuscript uses expert opinion and published information to develop multiple population projection scenarios for the endemic and endangered Puerto Rican boa (*Chilabothrus inornatus*) to inform conservation decision making. The manuscript fits well within the scope of Animal Conservation as it has an obvious conservation focus and uses rigorous quantitative methods that can be used to inform upcoming classification or recovery planning decisions. The introduction provides an appropriate amount of background information and breadth. The methods are detailed and clearly explained, the analyses are comprehensive, and the results section is concise. Overall, I enjoyed this manuscript. I have only a handful of minor comments that I'd like to see addressed. Well done!

In the abstract, the authors provide a strong justification for using expert knowledge and a quantitative population projection for data deficient species, but they do not include their key findings nor do they suggest how their results can be used. I suggest the former (i.e., the justification) be streamlined so that the latter can be included.

In the discussion section, it may be worth revisiting the impetus for this work in the opening paragraph.

Is 30 years a long enough of a times series given the generation time of this species? Was any consideration given for evaluating a longer time series, say 50 to 100 years?

Specific Comments (references to line numbers are for interior numbers):

Line 1: Remove the letter 'a' before the word 'Developing' in the title.

Line 55: Are there any New World examples that could be included?

Line 68: Add, "Endangered Species" to the word "Act".

Lines 102–103: Specify if the total length or snout-vent length is used.

Lines 292–294: This sentence should be move to the discussion. The authors might also consider providing some additional details in the discussion section regarding the assumptions and limitations associated with conducting sensitivity analyses where all parameters but one is fixed (single-factor), versus a sensitivity analyses where multiple parameters are permitted to vary simultaneously (e.g., Latin hypercube sampling. See Fordham et al. 2016 for a general explanation and Bradke et al. 2018 for an example using snakes).

Lines 331–333: It might be useful to provide a specific example of how the results from the sensitivity analyses might be used to establish priorities for future research.

Lines 375–376: This sentence could be shortened to, “Estimates of adult boa survival rates using mark-recapture or known fate models would improve confidence in our model predictions and utility for decision-making.”

Lines 519–521 (Table 1): The unit (i.e., annual) for the ‘Average’ should be specified in the table legend.

References

Bradke, D. R., R. L. Bailey, J. F. Bartman, H. Campa, E. T. Hileman, C. Krueger, N. Kudla, Y. M. Lee, A. J. Thacker, and J. A. Moore. 2018. Sensitivity analysis using site-specific demographic parameters to guide research and management of threatened eastern massasaugas. Copeia 106:600–610, 611.

Fordham, D. A., S. Haythorne, and B. W. Brook. 2016. Sensitivity Analysis of Range Dynamics Models (SARDM): Quantifying the influence of parameter uncertainty on forecasts of extinction risk from global change. Environmental Modelling & Software 83:193–197.